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ABSTRACT

The validation of Tennessee's Pre-Professional Skills Tests (PPST) is described. Panels of experts from teacher education institutions and local school districts performed the test item review, focusing on test validity and minimum requirements for admission to teacher education programs. Participants (136 teacher educators, 108 high school teachers and curriculum specialists, and 15 professional educators) were sent preview information before participating in the review. The teacher educator panel reviewed every test item; (1) for its relevance to successful performance in their institution's teacher preparation program, and (2) to determine whether or not a student should be required to correctly answer the item in order to be admitted to a teacher education program. Judgments were also made on the amount of a test section's content a student must know for successful school performance and for admission. Two public educator panels reviewed every test item using two questions: (1) whether education students had the opportunity to learn this content; and (2) whether this knowledge was necessary for successful teaching performance. The PPST includes both multiple choice items (reading, mathematics, writing, and essay items). (Data analyses and scoring techniques are briefly described). (GDC)

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VALIDATION OF THE PRE-PROFESSIONAL SKILLS TESTS AND RECOMMENDATION OF PERFORMANCE STANDARDS IN TENNESSEE

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Selection of Participants, Data Collection, and Data Analysis Techniques

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Selection of Study Participants

The strategy employed in the validation of the Pre-Professional Skills Tests (PPST) required that panels of teacher educators and public school educators review the PPST and make professional judgments about the content of the tests. In this study, panels defined as groups of experts from teacher education institutions and local school districts performed the test review functions. A committee of teacher educators and public school educators focused on test validity and minimum teacher education program admission scores.

Panel Member Selection

The nomination of panel members was made in response to a letter of request from the Tennessee Commissioner of Education. The materials mailed to the chief academic administrators of all teacher education program units and selected local school district superintendents in Tennessee included the letter of request, institutions for nominating panel members, an overview of panel functions, the number of panelists to be nominated, and nomination forms. The local school districts selected to receive requests for nominations of panelists were all districts in the county of the meeting sites and the adjacent counties. This local school district selection procedure minimized travel time for the public educator panelists while providing representation of diverse school districts in Tennessee.

The request for nominations from teacher education institutions specified that the nominees should be faculty members who taught professional education courses taken by all students in the institution's teacher education program. The number of nominees requested from each institution varied from 2 to 20. The relative productivity of the teacher education program unit was used as the basis for determining the number of nominees requested. A total of 136 teacher

educators participated in the review of the PPST.

Superintendents of local school districts with high schools were asked to nominate instructional personnel such as curriculum specialists and experienced teachers who were highly knowledgeable about the district's mathematics or reading/writing program for college preparatory students. A range of 1 to 10 nominees for each panel (mathematics and reading/writing) was requested from the local school district. The size of the school district's enrollment was the factor used in specifying the number of nominees. The number of public educators for the 57 local school districts involved in the study was 108 for the panel.

Standards Committee Selection

A group of 15 professional educators served as the Standards Committee for the PPST study. The committee consisted of eight teacher educators and seven public school educators who were currently employed in Tennessee. The members of the committee were selected by personnel in the Tennessee State Department of Education and were contacted by the study staff to obtain their commitment to serve on the committee.

Functions of Participants

The functions performed in the review of the PPST by teacher educators and public educators were characterized as panel activities. One teacher educator panel and two public educator panels were utilized in the study.

Panel Preparation

In advance of the panel meetings, the panelists were sent preliminary materials related to their tasks. The materials provided to the members of each panel included an overview of the tasks to be performed, directions to be followed in reviewing the PPST, and sample sections of the data collection

forms to be used. Two versions of these materials were prepared for teacher educators and public educators. Test content specifications for the appropriate tests of the PPST battery were also supplied to each panelist.

Teacher educators were encouraged t review the nature and content of the teacher education programs at their respective institutions prior to the panel session. The scope of the review was defined to include all courses that must be taken by all students. Public educators were advised to gather additional information on the content of the instructional program for college preparatory students in their respective school districts if necessary to make informed judgements about the PPST.

Panel Functions

Each teacher educator panel member reviewed all tests and sections of the PPST battery to make judgments on program relevance and performance standards. First, the panelists examined each test item in order to respond to two questions: (1) "Does a student need to know the content of this item in order to perform successfully in your institution's teacher preparation program?" and (2) "Should a student be required to know the answer to the item in order to be admitted to a teacher preparation program in Tennessee?" The response options to these questions were "Yes" and "No." Second, the panelist made a summary judgment on the test or section regarding the amount of the content that a student must know to perform successfully in the teacher preparation program of the panelist's institution. The choices for responses were "almost all", "most," " a small amount," and "almost none." Finally, the panelist recorded the total number of questions on the test or section that a student should be required to answer correctly in order to be admitted to the teacher preparation program at the panelist's institution. With respect to the Essay section of the Writing Test, the panelist indicated whether or not a teacher education

program applicant (1) needs to be able to write an acceptable essay in order to perform successfully in the teacher preparation program of the panelist's institution and (2) should be required to write an acceptable essay in order to be admitted to a teacher preparation program in Tennessee. The recommended minimum score for the essay (scale values of 1-6) was also recorded.

Each public educator panelist reviewed the assigned test(s) of the PPST battery to make judgments on adequacy of preparation and job relevance. First, the panel member reviewed each test item in order to respond to two questions: (1) "Do students in the college preparatory program in your district have the opportunity to learn the content of this item?" and (2) "Does a student need to know the content of this item in order to perform successfully as a teacher in Tennessee?" For the first question, the respondent used a criterion of "at least 90% of the district's college preparatory students" to select one of three responses: "Yes", "No", and "*" (do not know). The response choices for the second question were "Yes" and "No". Second, the panel member made two summary judgments on the test or section regarding the amount of the content that (1) the district's college preparatory students have the opportunity to learn and (2) successful Tennessee teachers must know. The response options for these two judgments were "almost" all," "most," "a small amount," and "almost none". After reviewing the Essay section of the Writing Test, the panel member indicated whether or not the district's college preparatory students (1) have the opportunity to learn how to write an acceptable essay and (2) should know how to write an acceptable essay in order to perform successfully as a Tennessee teacher.

In order for the panelists to perform their functions, a current edition of the PPST battery was supplied by ETS for review by the panel members assigned to each test. The correct response to the multiple-choice questions

on all tests were marked on the copies recieved by the panelists. The members of the reading/writing panel also recieved 12 essays that were written by examinees who had taken the Writing Test of the PPST. Each of the points on the score range for the essay (1-6) was represented by two essays. Each panel member worked independently in conducting the review based on instructions given by the study staff as described in the review booklet.

Data Collection

The panel meetings of data collection were held during a two-week period in October, 1984. Two two-hour sessions (1:00 p.m. - 3:00 p.m. and 4:00 p.m. - 6:00 p.m.) were conducted at six sites across the state. The sites and dates of the meetings were Nashville on October 22nd, Jackson on October 23rd, Memphis on October 24th, Chattanooga on October 29th, Knoxville on October 30th, and Johnson City on October 31st. In addition to the involvement of the study staff, an ETS representative participated in the data collection meetings to ensure that test security was maintained.

Data Analysis Techniques

Data were obtained on selected demographic variables for members of the panels and the Standards Committee. These variables were geographic area, gender, and ethnic group. The analyses of these data for the separate panels and the committee consisted of preparing frequency and percentage distributions. The years of professional education experience in Tennessee as teacher educators or public school educators was reported for the members of the respective panels. These data were summarized by obtaining frequency and percentage distributions, means, and standard deviations for the groups of panelists.

The content review of the multiple choice questions on the PPST battery

was conducted at the item and test or section levels by the teacher educators and public educators. At the item level, the panelist responded to review questions by choosing structured response options. The choices were "Yes" or "No" for all review questions except for the public educator panel question on adequacy of preparation, which also included "Do Not Know" as a third option. At the test or section level, four structured response options were used in making judgments.

At the multiple-choice test item level, the initial step in the data analyses was to compute the frequency and percentage distributions of the panelists' responses to each review question. Using the percentages of "Yes" responses at the item level, the next step was to compute the percentages of items in a test or section that obtained more than specified percentages of "Yes" responses. The percentages established for summarizing across a test or section were more than 50%, 60%, 70%, 80%, and 90%. At the test or section level, the frequency and percentage distributions were computed for the responses of the panelists to the questions pertaining to each multiple-choice test or section.

The review of the Essay section of the Writing Test required that each group of panelists--teacher educators and public educators--respond to two questions designed especially for the respective groups. The response options for each question were "Yes" and "No." Frequency and percentage distributions were computed for the responses of the panelists to each question.

Each teacher educator recommended a performance standard for each test or section of the PPST. The recommended score for the Mathematics Test, Reading Test, and Writing--Multiple Choice Test consisted of the number of items that should be answered correctly for admission to the respondent's teacher education program. On the Writing--Essay Test, the panelists recommended the

minimum raw score on the scoring scale. The means of the raw score recommended by the panelists were computed for each test or section. The composite score for the Writing Test was derived by combining the raw scores for the Multiple Choice and Essay sections using an algebraic formula prescribed by ETS. The raw score means of the tests were converted to scaled score equivalents based on the norms of the PPST.